First Meeting of the Passaic River Basin Flood Advisory Commission

DEP Support to the Passaic River Basin Flood Advisory Commission

Natural and Historic Resources
Amy Cradic, Assistant Commissioner

Office of Engineering and Construction,
David Rosenblatt, Administrator

Bureau of Dam Safety and Flood Control
John Moyle, PE, Bureau Chief

Dam Permits and Safety Inspections
Flood Mitigation
Floodplain Mapping
Community Assistance with FEMA Grant

Passaic River Basin

Figure courtesy of USACE NY District

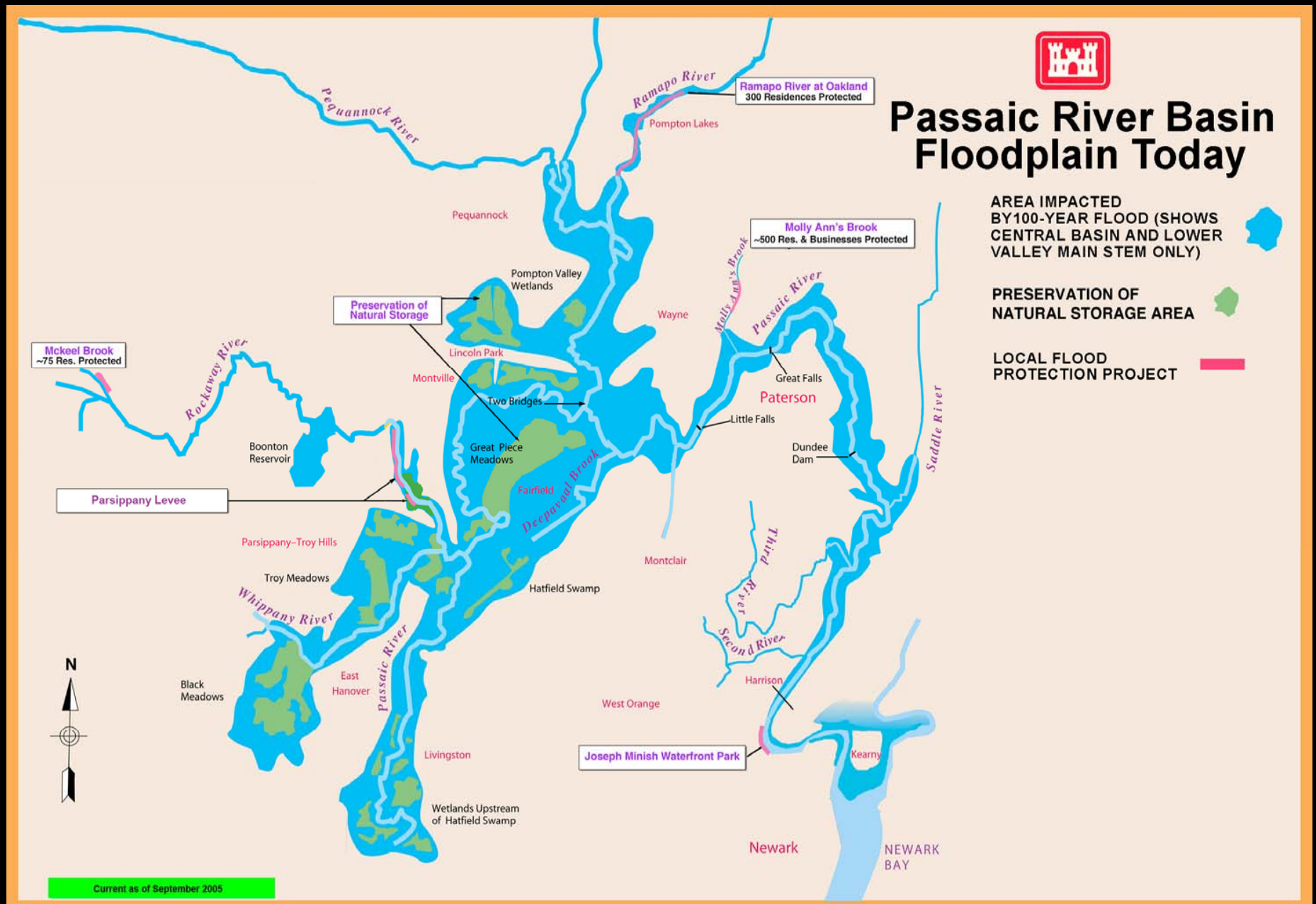
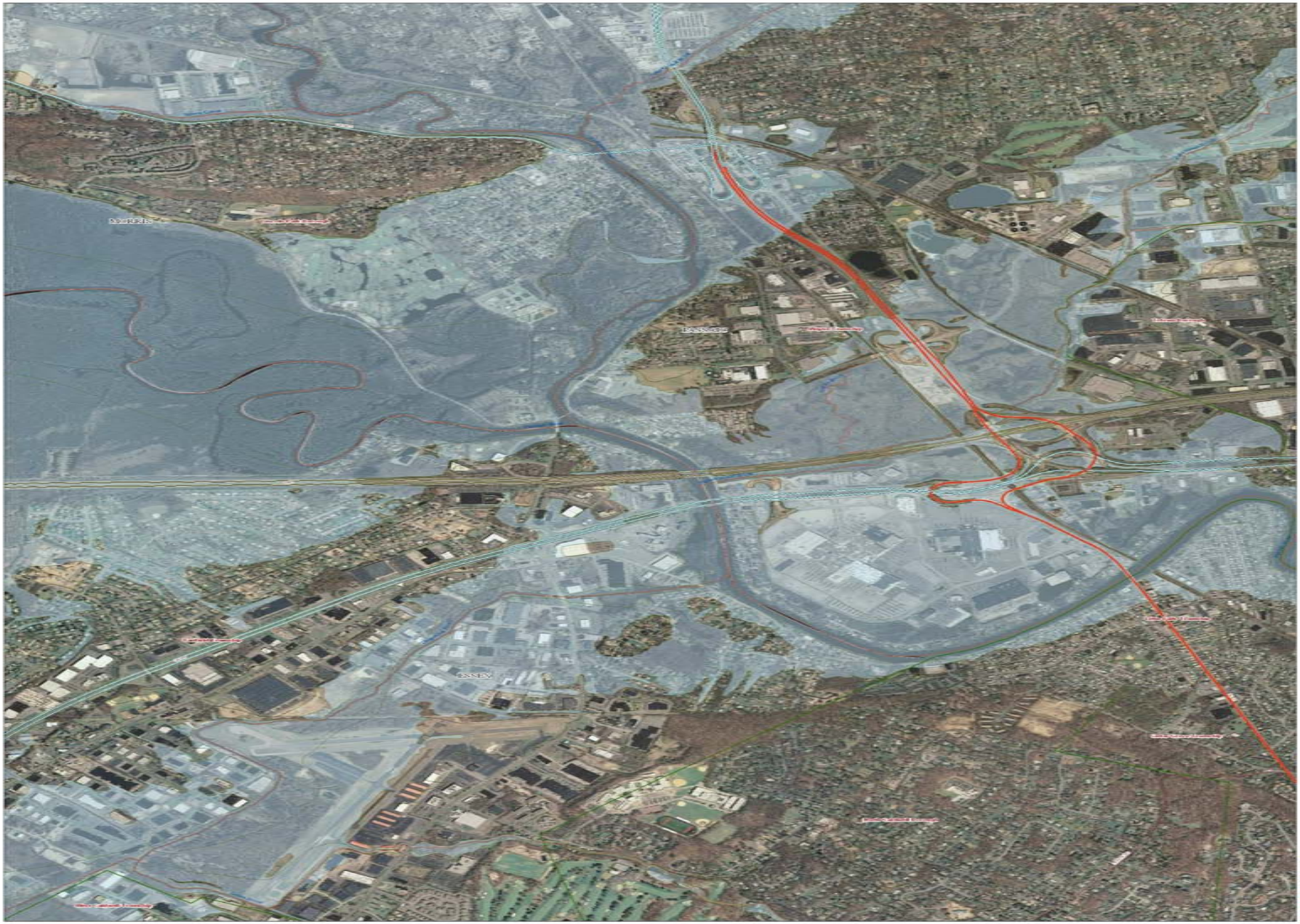


Figure courtesy of USACE NY District

PASSAIC RIVER BASIN FLOOD ADVISORY COMMISSION MAP - LOWER WAYNE TWP



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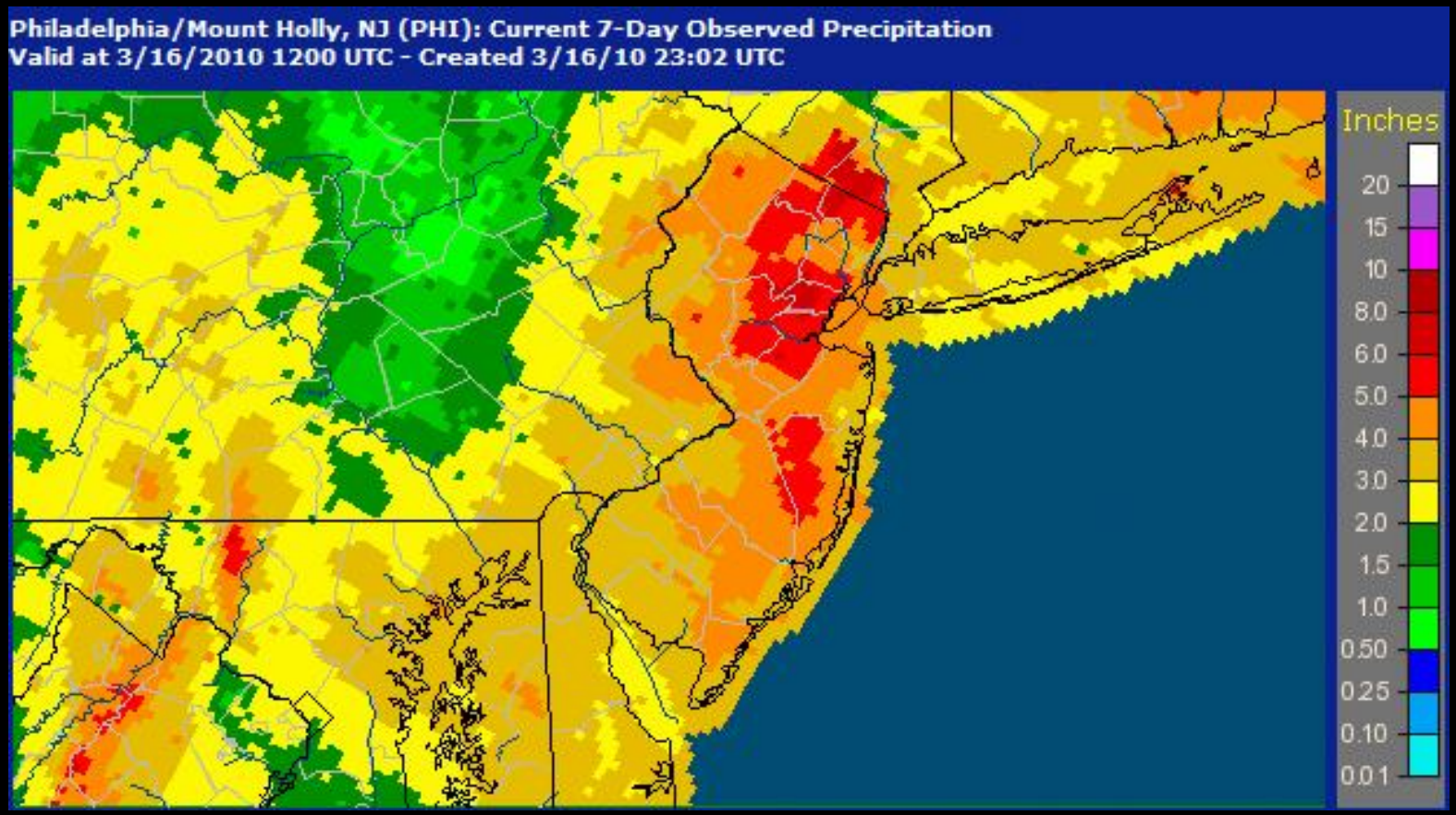
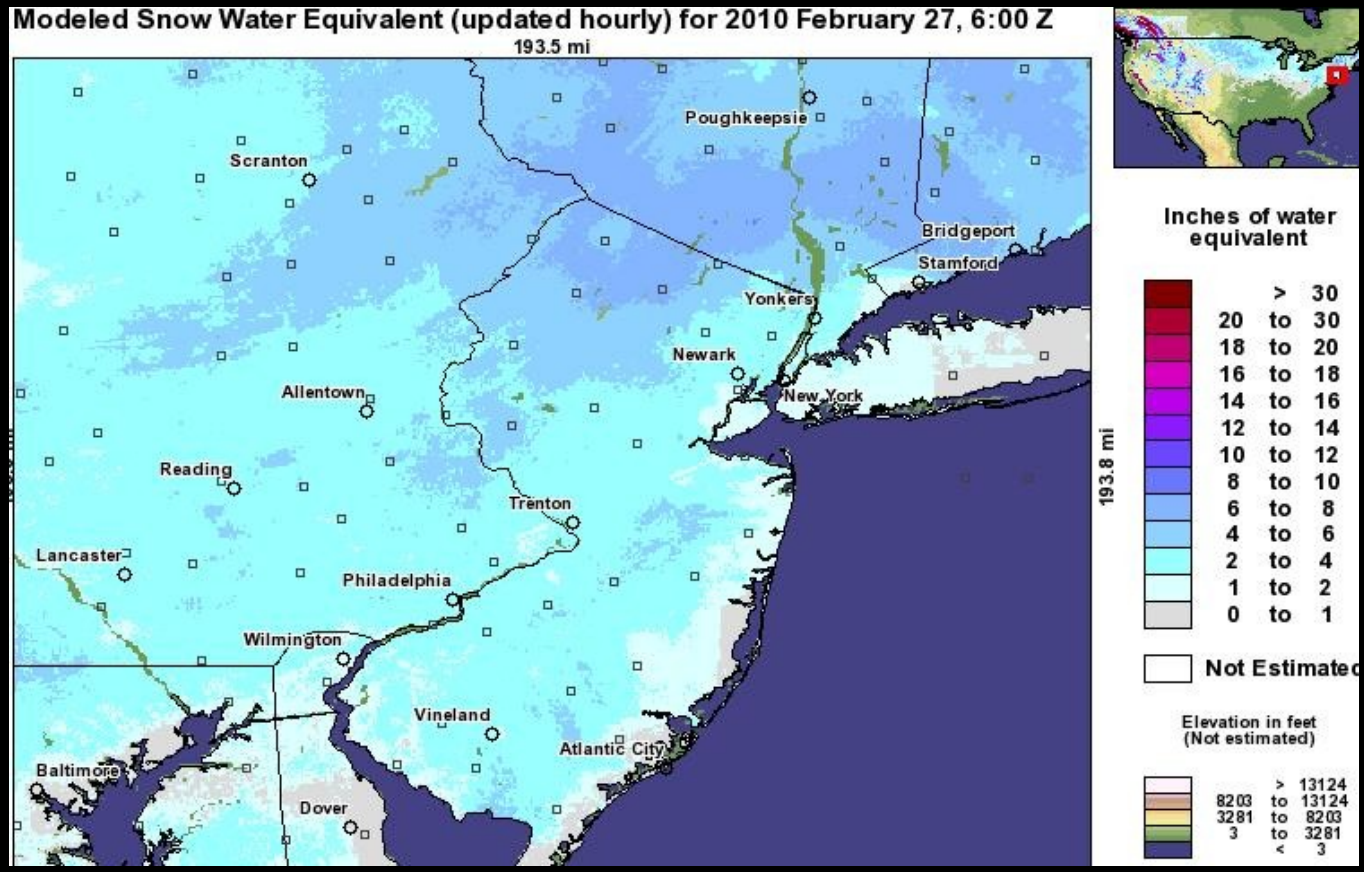
March 12-15, 2010 Storm



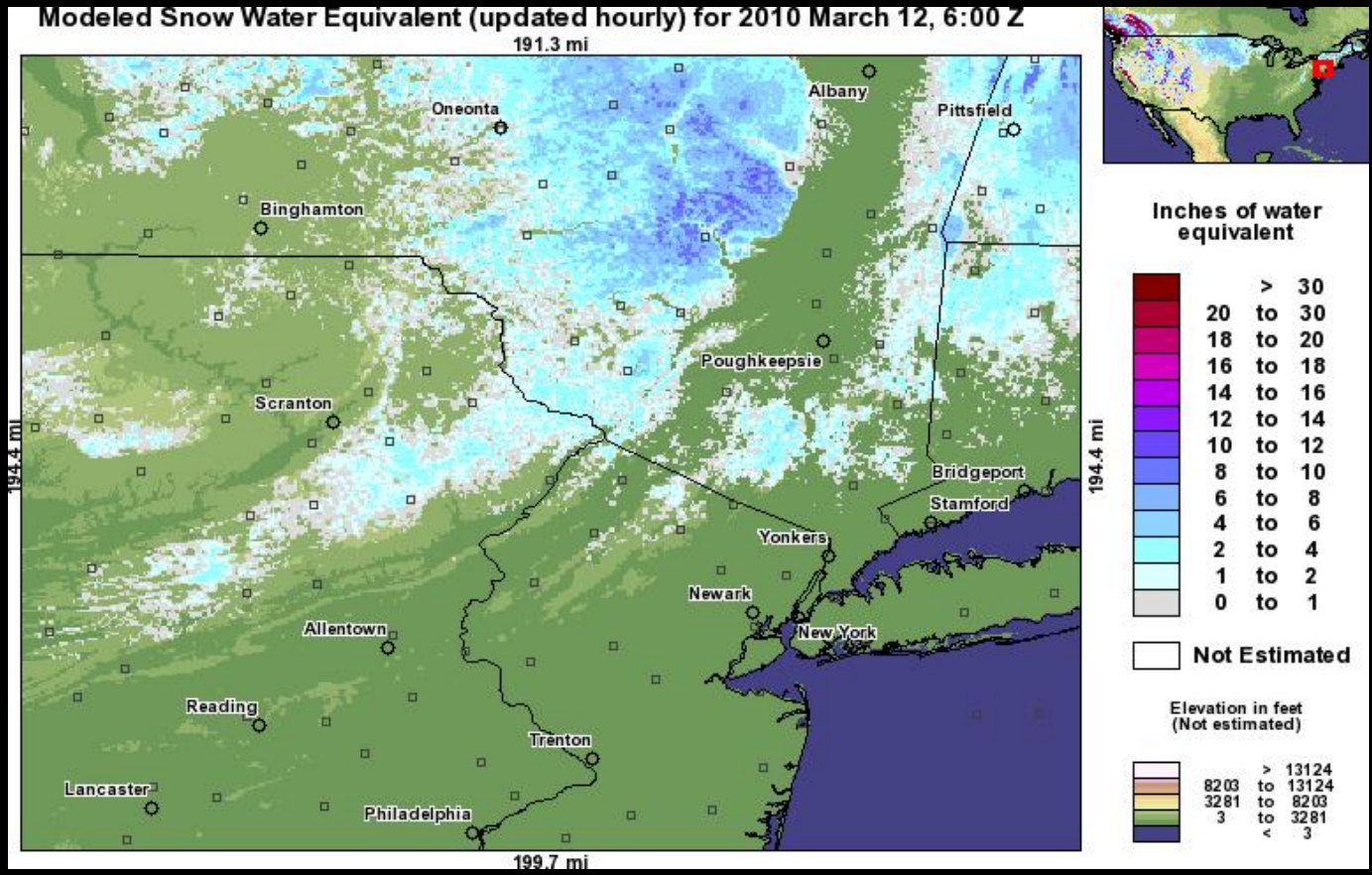
Screen capture of National Weather Service map of total observed precipitation for for the 7-day period ending March 16, 2010, at 0800 hours EDT. (from National Weather Service, 2010)

March 12-15, 2010 Storm



Screen capture of National Oceanic and Atmospheric Administration map of snow snow cover, in inches of water equivalent, on **February 27, 2010**. (from National National Weather Service, 2010)

March 12-15, 2010 Storm



Screen capture of National Oceanic and Atmospheric Administration map of snow snow cover in inches of water equivalent on **March 12, 2010** (from National Weather Service, 2010)

March 12-15, 2010 Storm

Photograph of flooding at the stage-only gaging station on the Ramapo River at Dawes Dawes Highway at Pompton, NJ (U.S.Geological Survey station 01388100), at peak stage on March 14, 2010, at 1:30 PM EDT. (Photograph by John Trainor, U.S. Geological Survey)

March 2010 Storm Comparison

Ramapo River near Mahwah (120 sq mi)

3/14/2010	5th highest peak of record	Q = 11,500 cfs, 40-yr event
4/5/1984	historic peak of record	Q = 15,500 cfs, 95-yr event

Pompton River at Pompton Plains (355 sq mi)

3/14/2010	3rd highest peak of record	Q = 20,400 cfs, 40-yr event
10/10/1903	historic peak of record	Q = 28,300 cfs, >100-yr event

Rockaway River above reservoir at Boonton (116 sq mi)

3/14/2010	5th highest peak of record	Q = 4,350 cfs, 20-yr event
4/5/1984	historic peak of record	Q = 5,590 cfs, 50-yr event

Passaic River at Pine Brook (349 sq mi)

3/16/2010	new peak of record	Q = 9,100 cfs, 60-yr event
4/5/1984	previous peak of record	Q = 8,000 cfs, 50-yr event

Passaic River at Little Falls (762 sq mi)

3/16/2010	storm peak	Q = 15,800 cfs, 20-yr event
10/10/1903	historic peak of record	Q = 31,700 cfs, >100-yr event

Conclusions from "The Passaic Flood of 1903" USGS Report

1. Great floods in the Passaic Basin arise only after a specially violent precipitation.

2. Under present conditions floods may be expected at frequent intervals.

3. A part of the damage along the lower valley is the result of encroachments on the part of individuals and public and private corporations.

4. The channel in the lower valley may be improved at certain points by straightening it and judiciously making cut-offs.

5. Without the construction of numerous levees the lower valley channel can not be made to carry great flood waters without damage.

6. Immunity from floods can be effected only by the construction of catchment reservoirs in the highlands or levees in the lowlands.

7. Levee construction would involve more damage than is now caused by floods, and the cost cost thereof would be prohibitive.

8. Flood catchment reservoirs may be constructed economically and provide storage to compensate for the dry-season flow, thereby maintaining water power at Paterson, Passaic, and other points, and providing for future municipal water supply.